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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/014,885	12/11/2001	Franz Forster	964-011861	2379

7590

10/09/2003

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EXAMINER

AVERY, BRIDGET D

ART UNIT	PAPER NUMBER
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3618

DATE MAILED: 10/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/014,885

Applicant(s)

FORSTER, FRANZ

Examiner

Bridget Avery

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8 and 14-18 is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-13 and 19-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. The amendment filed by applicant on July 15, 2003 is acknowledged and has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 1-7, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brice (US Patent 4,776,415) in view of Degonda et al. (US Patent 5,964,473).

Brice teaches a drive device for a machine, the drive device including a traction drive system having a drive axle; and a hydraulic work system (34, 36) having at least one electric motor (44, 46) and at least one pump (42) driven by the electric motor (44, 46) (see column 2, lines 43-45), where at least one of the electric motor and the electric pump (42) of the hydraulic work system (34) are integrated into the drive axle (60, 64) or are located directly on the drive axle (60, 64) (as shown in Figure 2). The electric motor (44, 46) of the hydraulic work system is provided as the traction motor of the traction drive system. Re claims 5 and 6, the examiner takes Official Notice to the functional equivalence of disc rotor motors and hydraulic motors in the vehicle art. Brice also teaches a regulation system/control (74) for the motors (58). Re claim 7, an installed

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delivery capacity of the pump (42) is designed to deliver a volume of fluid required by the hydraulic work system (34, 36) via hoses (38, 40) (see column 2, lines 40-47).

Brice lacks the teaching of an axle having two motors and planetary gears.

Degonda et al. teaches an axle (157) having two motors (155). The drive axle (157) has two traction electric motors (155) located on the ends of the drive axle (157).

Based on the teachings of Degonda et al., it would have been obvious to one having ordinary skill in the art, at the time the invention was made to modify the device of Brice to include an axle housing two motors to eliminate the manufacturing cost associated with providing two separate axles.

3. Claims 13 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brice ('415) and Degonda et al. (473), as applied to claim 1 above, and further in view of Ching (US Patent 4,629,950).

Brice teaches the features described above including a motor control (74).

Brice lacks the teaching of an axle housing.

Ching teaches an axle housing.

Based on the teachings of Ching, it would have been obvious to one having ordinary skill in the art, at the time the invention was made to modify the combination of Brice and Degonda et al. to include an axle housing to protect the motors from potential damage caused by contact with the external environment. Re claim 20, it would have been obvious to one having ordinary skill in the art to mount the control (74) of Brice onto the axle housing (2) for user convenience.

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4. Claims 1, 2, 6, 7, 9, 10, 19 and 20-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schwab et al. (US Patent 3,780,820) in view of Gardner, Jr. (US Patent 4,763,751).

Schwab et al. teaches a drive for a fork lift (10 as described in column 3, line 47), the drive device including a traction drive system having a steering drive axle (24); and a hydraulic work system having at least one hydraulic motor (28, 28a) and at least one pump (30a), where at least one of the hydraulic motor and the pump of the hydraulic work system are integrated into the drive axle or located directly on the drive axle. Planetary gear trains (72, 72a) are also located directly on the axle and downstream of the motors (28, 28a). (as shown in Figure 3). Re claim 21, applicant's attention is directed to column 7, lines 2-5. Re claims 22 and 23, the device including a valve control device (see column 5, lines 19-30) on the pump (30) and fastened to the axle housing the wheel motors (28, 28a)

Schwab lacks the teaching of a pump driven by old and well known electric motors (38a, 38b).

Gardner, Jr. teaches a vehicle including a pump driven by an electric motor.

Based on the teachings of Gardner, Jr., it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Schwab et al. to have the pump driven by an electric motor instead of an engine to reduce the workload of the engine and thereby reduce pollution caused by engine exhaust. It would have been obvious to one having ordinary skill in the art to provide electric motors on the wheel axles of Schwab to enhance efficiency.

Allowable Subject Matter

5. Claims 8 and 14-18 are allowed.

Response to Arguments

6. Applicant's arguments with respect to claims 1-7, 9-13 and 19-24 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Roberts shows a mechanized walker.

Lenz shows a hydraulically driven electrically powered vehicle with energy recapture.

Pigeroulet et al. shows driving units for automotive vehicles and the like.

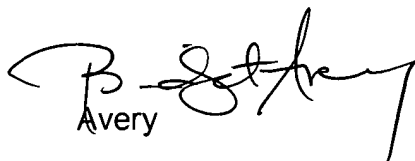
8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication should be directed to Bridget Avery at telephone number 703-308-2086.



Avery

October 2, 2003



BRIAN L. JOHNSON
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600

10/6/03